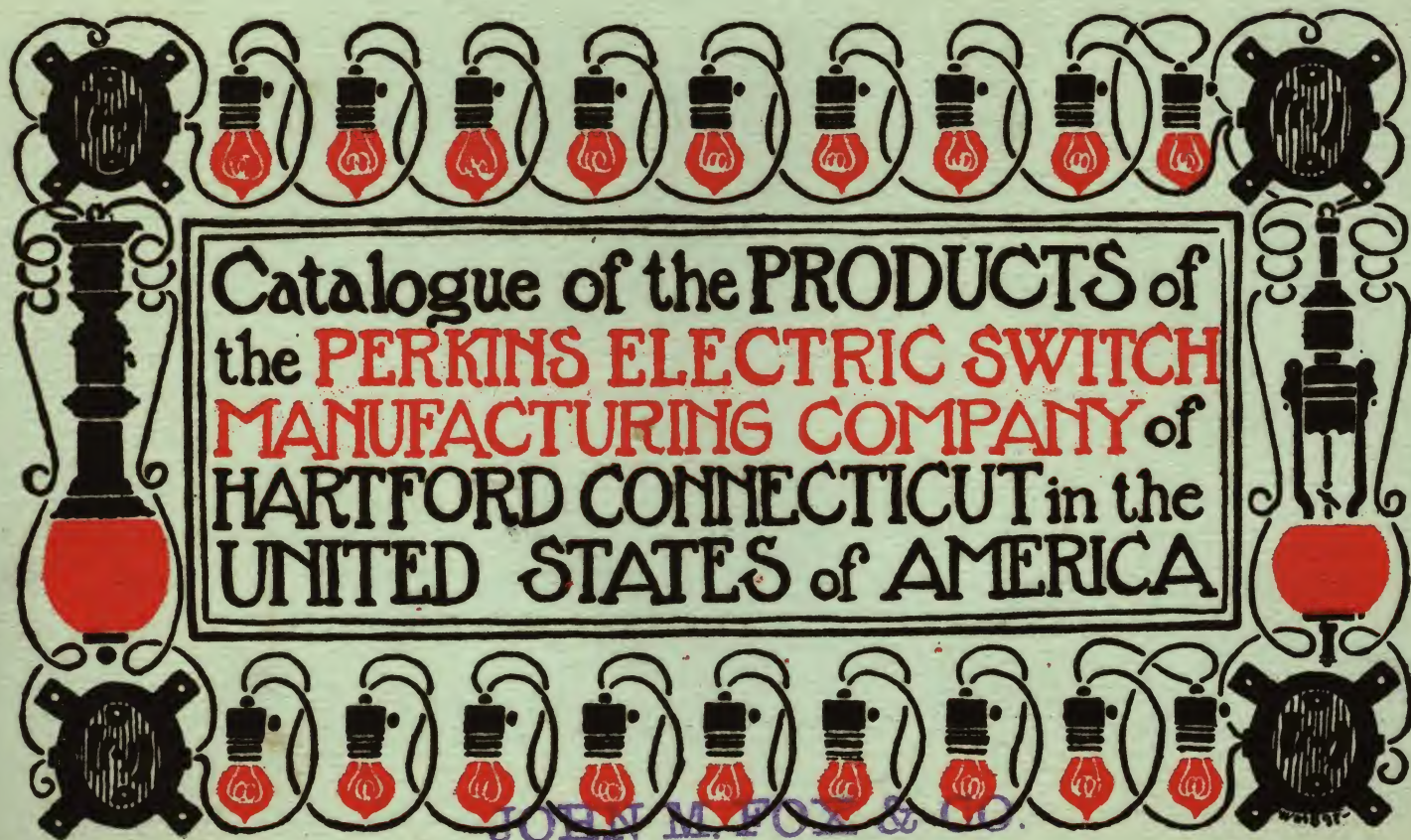




Catalogue of the PRODUCTS of
the **PERKINS ELECTRIC SWITCH**
MANUFACTURING COMPANY of
HARTFORD CONNECTICUT in the
UNITED STATES of AMERICA

JOHN M. FOX & CO.

66 Union St. Portland Me

Sole Agents

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From the collection of:

Mike Jackson, FAIA

ILLUSTRATED PRICE LIST

.. OF ..

**The Perkins Electric Switch
Manufacturing Company,**

❧ HARTFORD, CONN. ❧

NEW YORK OFFICE, 219 Havemeyer Building.

CHICAGO OFFICE, 1538 Monadnock Building.

EXECUTIVE OFFICE AND FACTORY:

83 and 85 Woodbine Street, HARTFORD, CONN., U. S. A.

R. S. PECK & CO.
DESIGNERS
PRINTERS
241 RIFTON
CONNECTICUT



N the following pages are illustrated only such goods as we ourselves manufacture and for which we have secured U. S. letters patent.

Our switches and P-T. cut-outs have been electrically and mechanically tested and passed as excellent by the Factory Mutual Insurance Companies.

Porcelain of the best quality is used exclusively for bases of switches, cut outs, and sockets.

The regular cover for all switches is nickel plate, but other finishes will be furnished, if desired.

The bases of all switches for sizes up to and including 50 Amperes are made both slotted, for cleat or moulding work, and closed, for concealed work. In ordering, state whether open or closed base is desired.

Having acquired a controlling interest in the partnership of Waterhouse, Gamble & Co., we shall continue the manufacture of the Waterhouse, Gamble & Co. Arc Lamp, maintaining its previous excellent character and quality.

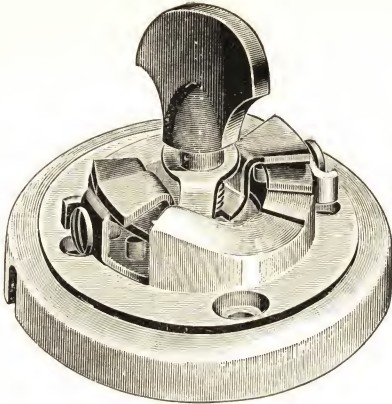
Our Incandescent Lamp is the only one now made containing the celebrated PERKINS Filament, and is so well known that it requires but a few words.

Prices on all goods are F. O. B. cars or boat at Hartford.

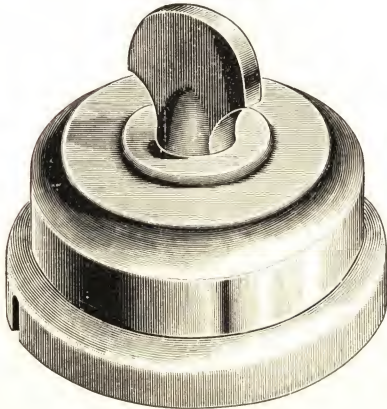
Persons unknown to us and who wish to open an account, will kindly forward the customary business references with their order.

If it is desired to have the goods sent C. O. D., a deposit sufficient to cover express charges both ways should accompany the order.

THE PERKINS ELECTRIC SWITCH MANUFACTURING CO.



Nos. 20 and 21.



Nos. 20 and 21

Single Pole Switches.

Catalogue No. 20.	5 Amperes, Single Pole,	.	.	.	.	.	\$0.50
" " 21.	10 " " "	.	.	.	.	.	.60

These Switches are designed to operate safely on any circuit up to 120 volts.

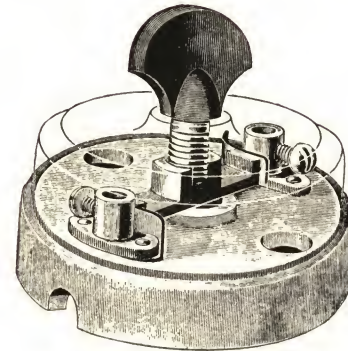
Furnished with hard rubber handles and nickel plated covers.

In ordering goods please specify catalogue number.

Single Pole Switches.

Catalogue No. 11. 5 Amperes, Single Pole, \$0.55

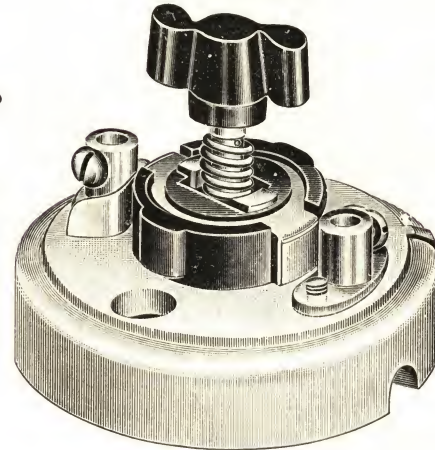
Furnished with hard rubber handles
and nickel plated cover. Will break
current safely at 220 volts.



No. 11 5 Ampere.

Catalogue No. 16. { 3 Amperes, Single Pole, at 500 volts, . . . }
 { 10 " " " " " 220 " . . . } \$0.70

Furnished with hard rubber or metal
handles.



No. 16. 10 Ampere.

In ordering goods please specify catalogue number.

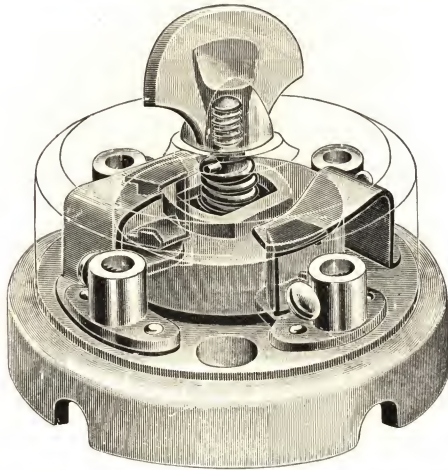
JOHN M. FOX & CO.
66 Union St. Portland Me
Selling Agents.

Double Pole Switches.

THE "GIBBS" SWITCH.

(Patented March 27, 1894.)

Double Pole, Double Break.



No. 12. 10 Amp. Double Pole Switch. Full Size.

Catalogue No.	12.	10 Amperes,	.	.	Double Pole,	.	.	\$1.25
"	"	13.	15	"	"	"	"	1.75
"	"	14.	30	"	"	"	"	2.25
"	"	18.	50	"	"	"	"	5.00
"	"	17.	10	"	for Conduit Boxes,	"	"	1.25

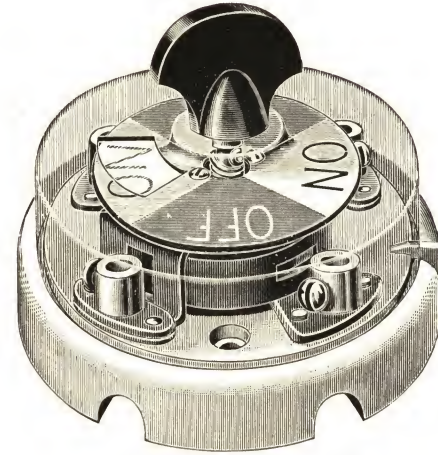
The special feature of this switch consists in the loose contact plates allowing automatic adjustment between the points, so that when "made," contact is assured with every point by the pressure of strong spring copper brushes upon one end of the plate, forcing the other against the adjoining contact plates.

Furnished with metal handles and nickel plated covers, porcelain bases for either concealed or moulding work. Hard rubber handles if desired.

In ordering goods please specify catalogue number.

“ON” “OFF”

Catalogue No.	11D.	5 Ampere, Single Pole, Dial.
“	“	16D. 10 “ “ “ “
“	“	12D. 10 “ Double “ “
“	“	13D. 15 “ “ “ “
“	“	14D. 30 “ “ “ “
“	“	18D. 50 “ “ “ “
“	“	15D. 15 “ Triple “ “

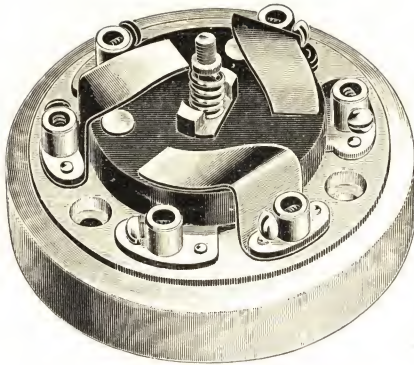


PRICE on Nos. 11D, 16D, 12D and 13D, 10 cents net additional.

“	“	14D and 15D, . . .	15	“	“	“
“	“	18D,	20	“	“	“

In ordering goods please specify catalogue number.

Triple Pole Switch.



No. 15. For Edison 3-Wire System.

Catalogue No. **15.** 15 Amperes, Triple Pole, \$3.00

This switch breaks simultaneously the three wires (each at two points), when used with the Edison 3 wire system.

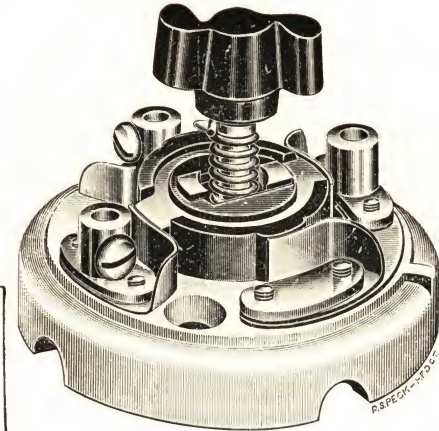
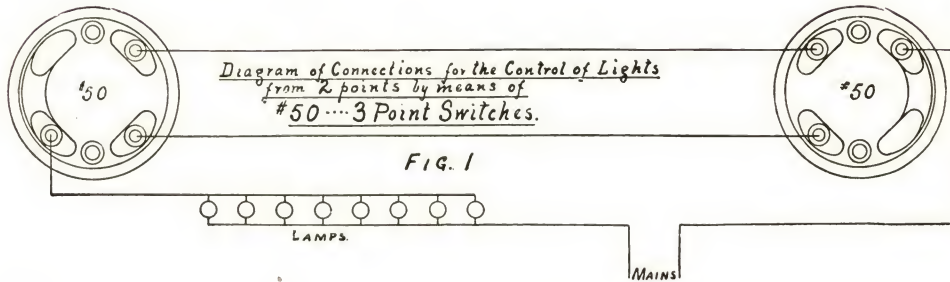
Furnished with metal handles and nickel plated covers.

In ordering goods please specify catalogue number.

Three Point Switch.

Catalogue No. 50. 10 Ampere, 3 point, \$1.25

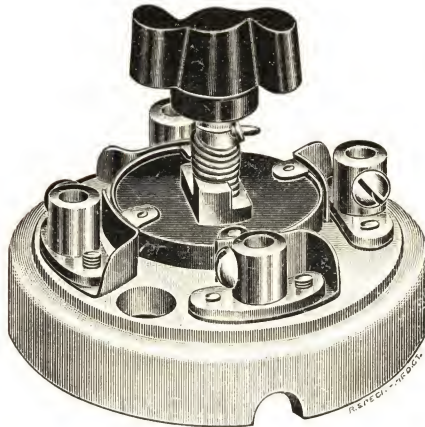
These switches are used for the control of lights from either one of two points, one three-point switch being located at each point. See diagram for wiring.



No. 50.

In ordering goods please specify catalogue number.

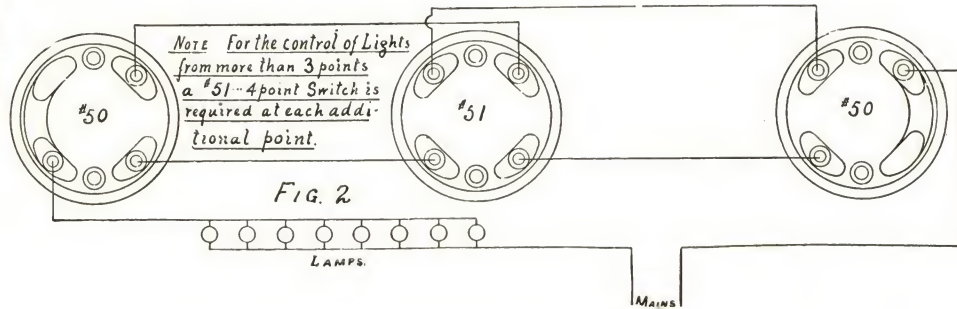
Four Point Switches.



No. 51.

Catalogue No. **51.** 10 Amperes, Four point, \$1.25

This switch is used for the control of lights from more than two points. Three-point switches are used at two of the points, and a four-point switch at each additional point. See diagram for wiring.



In ordering goods please specify catalogue number.

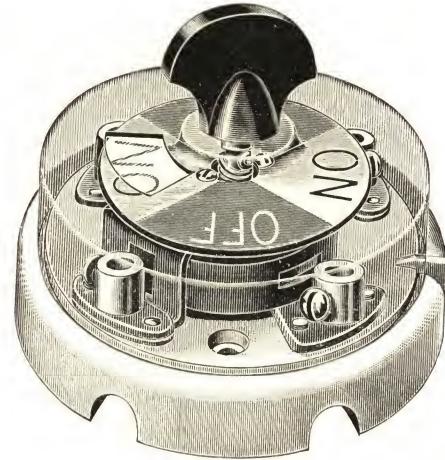
500-Volt Switches.

Catalogue No. 16.	3 Amperes, single pole,	500 volts, .	\$0.70
" " 19.	10 " " " " " "	" " .	3.00
" " 49.	3 " 3 way Headlight, " " .	" " .	1.50

No. **16** represents a switch which has long been sought—namely, a small, durable and reliable switch to break a 500-Volt current.

The same mechanism is used in this as in the Double Pole Gibbs Switches, but by a different arrangement of the screw-making device a break of $1\frac{1}{4}$ inches is obtained, *or more than one-third on each side.*

This switch is especially adapted for railway circuits.



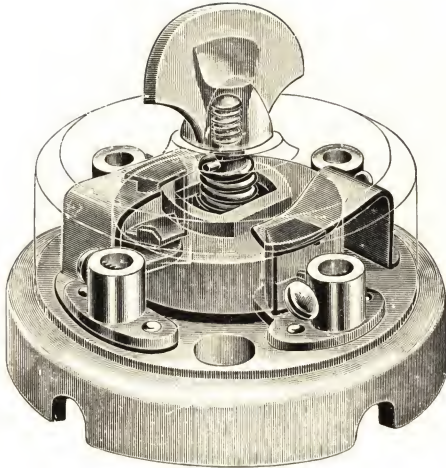
No. 19.

Where it is desired to control a stronger current, such as for a railway car heater, or where a large number of lights are used on a railway circuit, our No. **19** will be appreciated.

When used in connection with heating apparatus, this switch is furnished with a dial to indicate whether contact is made or not.

In ordering goods please specify catalogue number.

Three-Point 500 Volt Switch.



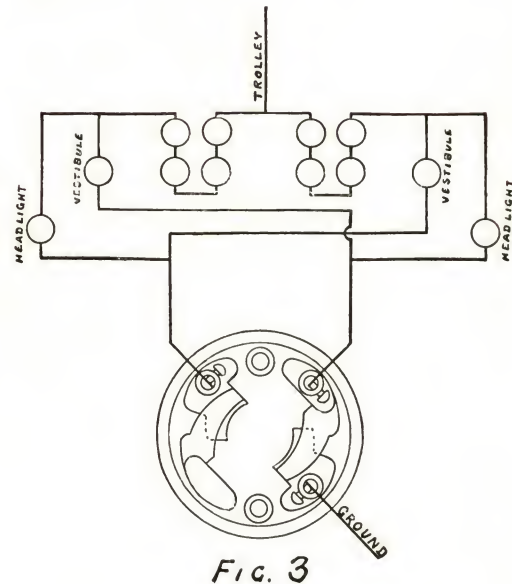
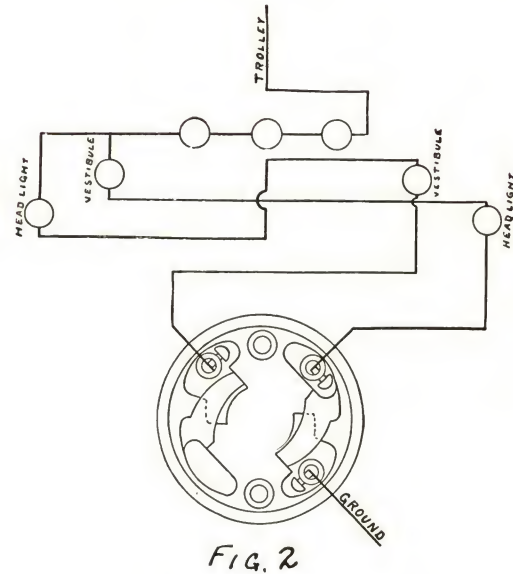
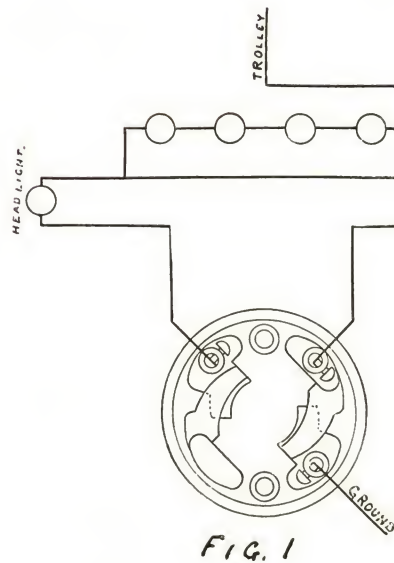
No. 49.

Catalogue No. 49. Three-point, 3 Amperes, 500 volts, . . . \$1.50

This switch will break the circuit without having to use an additional switch, and is especially adapted for use on street cars as a Head Light Switch, and also operate the interior lights as shown in diagrams on the following page.

In ordering goods please specify catalogue number.

Diagrams for Wiring Three-Point 500 Volt Switches.



In ordering goods please specify catalogue number.

Heat Regulating Switch, 500 Volts.

This switch is used for the regulation of heat by different combinations of the heaters.

On the commutator are four raised bosses or dials, on which are printed "OFF," "1," "2," "3," respectively. These dials appear successively before a hole in the cover, and thus indicate the position of contacts in commutator.

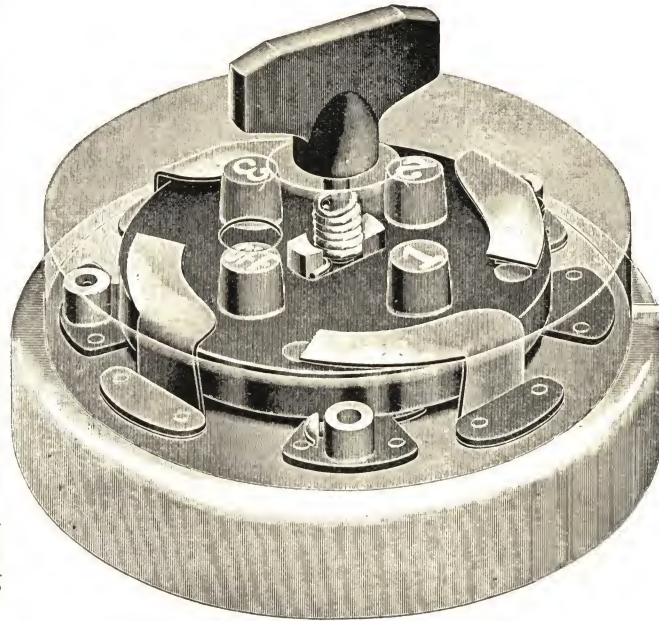
From the "off" position, as indicated by dial, the first quarter turn connects in circuit the heaters No. 1, and figure 1 appears on dial.

The second turn throws out of circuit heaters No. 1 and connects in circuit heaters No. 2, and figure 2 appears on dial.

Heaters No. 2 being of greater capacity than No. 1, a larger amount of heat is generated.

The third turn connects heaters No. 1 and No. 2 in parallel, which gives the maximum amount of heat, and figure 3 appears on dial.

Another valuable feature of this switch consists in the four simultaneous breaks of the circuit each time the switch is turned from one position to the next, thus reducing sparking to a minimum.



Catalogue No. **24.** 15 Amperes, 500 volts, \$6.00

In ordering goods please specify catalogue number.

Flush Switches.

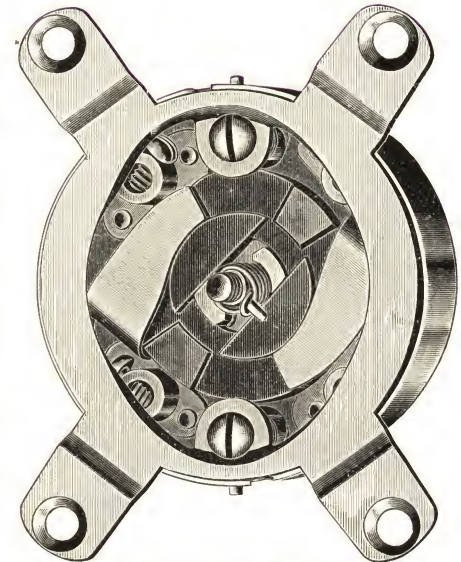
JOHN M. FOX & CO.
66 Union St. Portland Me
Selling Agent:



Exact Size and Appearance of Switch.

- Catalogue No. **11F.**
 5 Amp., single pole, \$1.55
 Catalogue No. **16F.**
 10 Amp., single pole, 1.75
 Catalogue No. **12F.**
 10 Amp., double pole, 2.25
 Catalogue No. **13F.**
 15 Amp., double pole, 3.00
 Catalogue No. **14F.**
 30 Amp., double pole, 4.00
 Catalogue No. **15F.**
 15 Amp., triple pole, 4.75
 Catalogue No. **50F.**
 10 Amp., 3-point, 2.25
 Catalogue No. **51F.**
 10 Amp., 4-point, 2.25

In ordering goods please
 specify catalogue
 number.



No. 12F. Switch with Plate Removed.

Flush Switches—Porcelain Cup.



Exact size and appearance
of switch.

Any of our ten ampere switches can be put into this porcelain cup so as to absolutely insulate all parts of the switch.

When used in this way, it is unnecessary to also use an iron wall box.

We are also prepared to furnish Porcelain cup switches with lock and key attachment as illustrated on the following page.

Catalogue No. **16C.**

10 Amp., Single Pole, \$1.75

Catalogue No. **12C.**

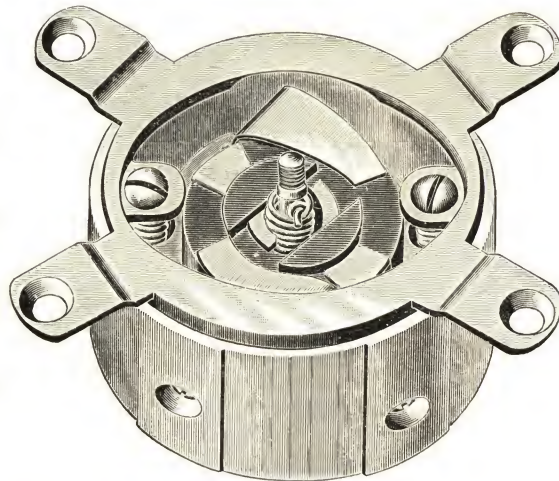
10 Amp., Double Pole, \$2.25

Catalogue No. **50C.**

10 Amp., 3 Point, . \$2.25

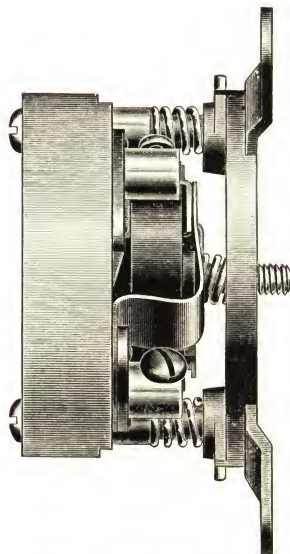
Catalogue No. **51C.**

10 Amp., 4 Point, . \$2.25



In ordering goods please specify catalogue number.

No. 12C.

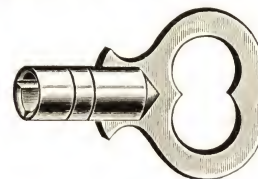


Side View with Plate and
Ring Removed.

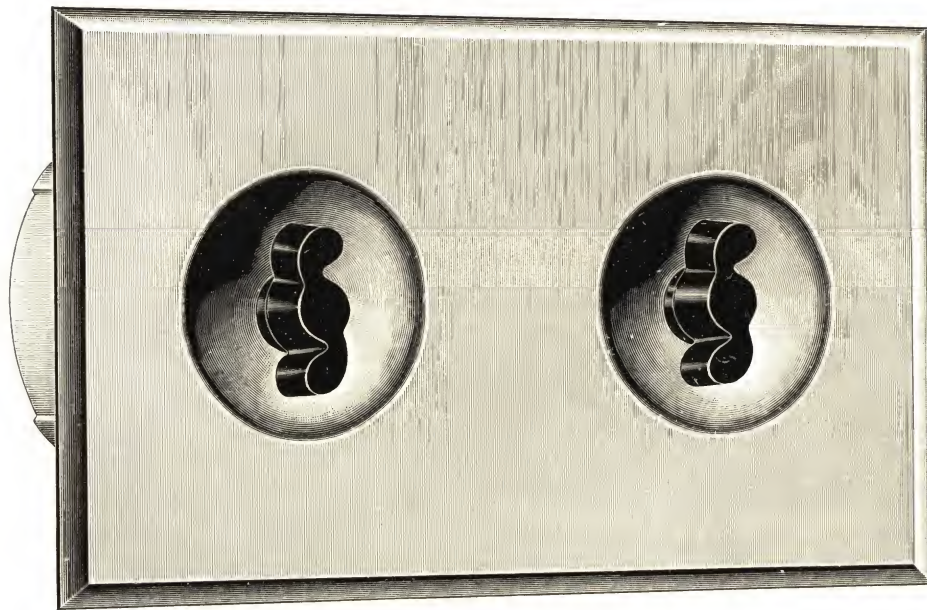
Lock Switches.

- Catalogue No. **16L.**
10 Ampere, single pole, \$2.00
- Catalogue No. **12L.**
10 Ampere, double pole, \$2.50
- Catalogue No. **13L.**
15 Ampere, double pole, \$3.25
- Catalogue No. **14L.**
30 Ampere, double pole, \$4.25
- Catalogue No. **15L.**
15 Ampere, triple pole, \$5.00
- Catalogue No. **50L.**
10 Ampere, 3 point, \$2.50
- Catalogue No. **51L.**
10 Ampere, 4 point, \$2.50

In ordering goods please specify catalogue number.



Gang Plates.



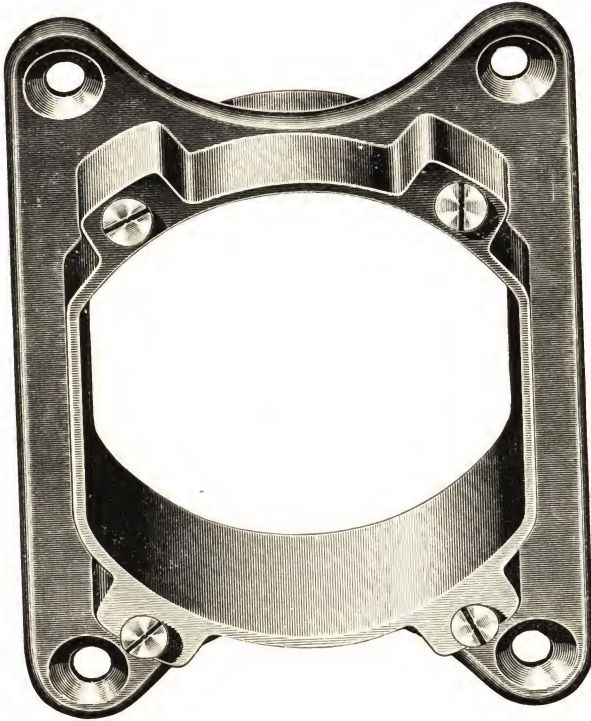
Plates can be finished for any quantity of switches and any style. We carry in stock plates from two to eight holes, finished in nickel or polished brass.

PRICE \$1.00 per hole per plate.

Notice. To obtain price of the plate and switches complete, add the list price of plate and list price of switches together; for instance, a gang of two No. 12's and one No. 16 would be \$3.00 for plate and \$3.20 for switches, complete, \$6.20.

In ordering goods please specify catalogue number.

Iron Wall Box For Flush Switches.



We manufacture and carry in stock Iron Wall Boxes for all styles of Perkins Flush Switches, mounted singly or in gangs.

When this style of Wall Box is used in the installation of gang Switches it is possible to attach each individual Switch to the box separately. This advantage will recommend itself at once to electrical contractors.

We are also prepared to furnish special Wall Boxes of any description, prices for which will be given upon application.

Price,30 each.

In ordering goods please specify catalogue number.

Porcelain Switches.



We illustrate herewith our all-porcelain switch. The cover is securely fastened to the base insuring complete insulation.

The working parts are the same as used in our regular Single Pole, Double Pole and 3 Point Switches.

Unless otherwise ordered, the switch is furnished in plain white porcelain, but it can be finished with any desired decoration, prices for which will be given on application.

Catalogue No.	30.	10 Ampere, Double Pole,	.	.	.	.	.	.	.	\$1.75
"	"	31.	10	"	3 Point,	.	.	.	.	1.75
"	"	32.	10	"	Single Pole,	.	.	.	.	1.25

In ordering goods please specify catalogue number.

FUSE SWITCHES.

These Switches combine a Fuse
Block or Rosette and a Switch, all
under one piece of porcelain.

The Fuse is fastened to the cover and so can easily be renewed by simply removing the cover.

The single pole and three way switches will break a dead short circuit with 3 ampere fuse at 500 volts without burning contacts or doing any damage.

In ordering goods please specify catalogue number.

Perkins Fuse Switches.

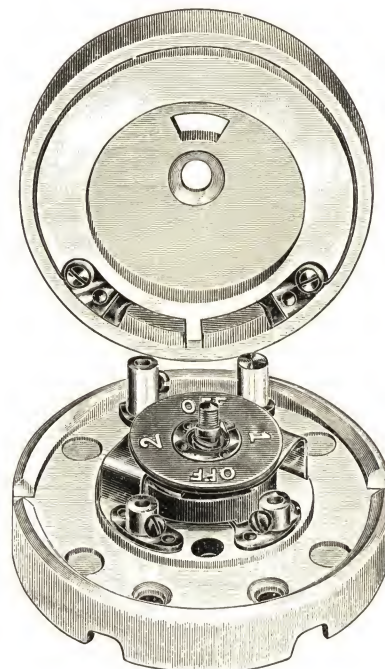
The following electrotypes illustrate Fuse Switches with cover removed and show how contact with the fuse is secured.



No. 22.



No. 26.



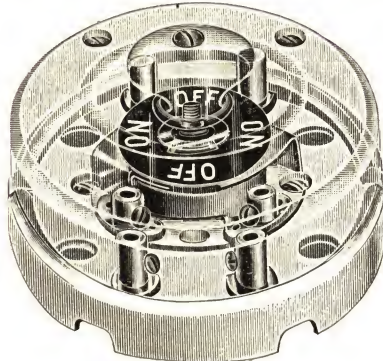
No. 29.

In ordering goods please specify catalogue number.

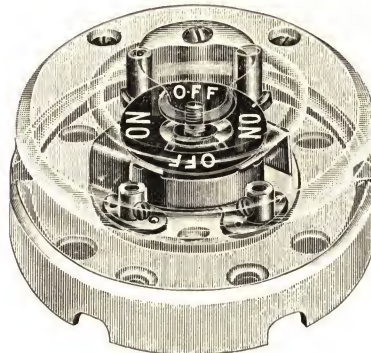
Fuse Switches.

Switches Nos. 26 and 29 are especially adapted for use in electric street cars on a current of 500 volts.

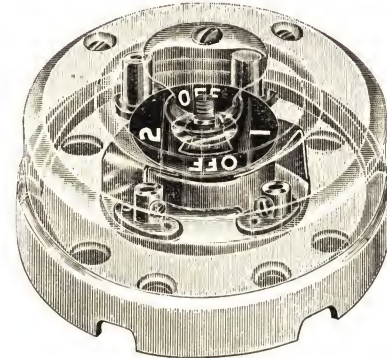
Switch No. 22 is made for 110 volt circuits, but can also be used safely and with good results on a 220 volt circuit with a current of 10 Amperes.



No. 22.



No. 26.

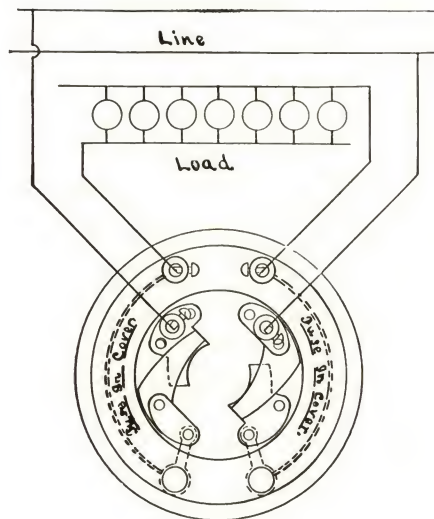


No. 29.

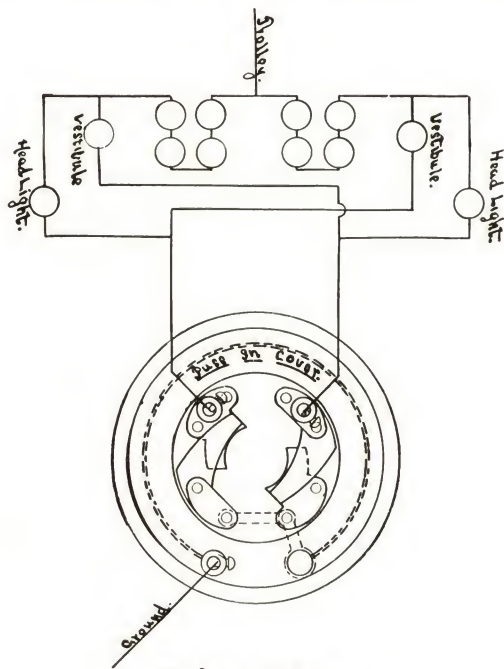
Catalogue No.	22.	10 Ampere,	Double Pole,	.	110 volts.	.	\$3.00
"	"	26.	3 " Single "	.	500 "	.	3.00
"	"	29.	3 " Headlight Switch,	"	"	.	3.00

In ordering goods please specify catalogue number.

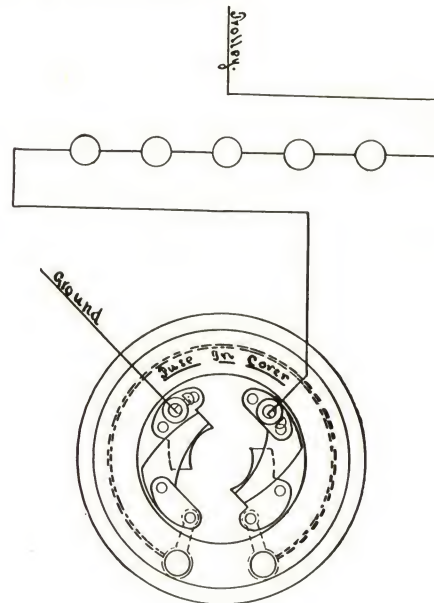
Diagrams for wiring Perkins Fuse Switches.



— #22 Fused Switch. —
— Double Pole for Low Voltage. —



— #29 Fused Switch. —
— Combination 3 Point + Single Pole. —



— # 26 Fused Switch. —
— Single Pole with Quadruple Break. —

In ordering goods please specify catalogue number.

Baby Knife Switches.

Catalogue No. **33.** 15 Amperes,
single pole, . . . \$0.50

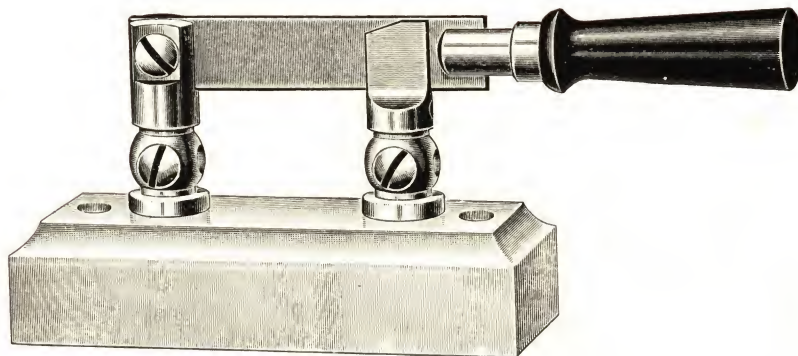
Catalogue No. **34.** 15 Amperes,
double pole,60

These switches are furnished with our special combination binding post, and can therefore be used for either cleat, concealed, or moulding work.

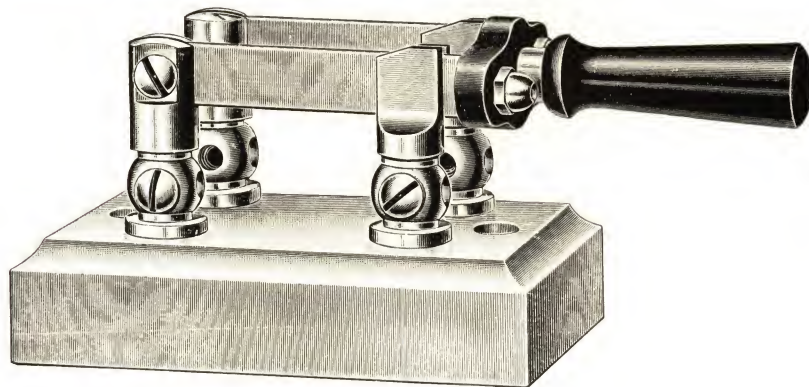
Copper blades and porcelain bases.

All parts highly finished.

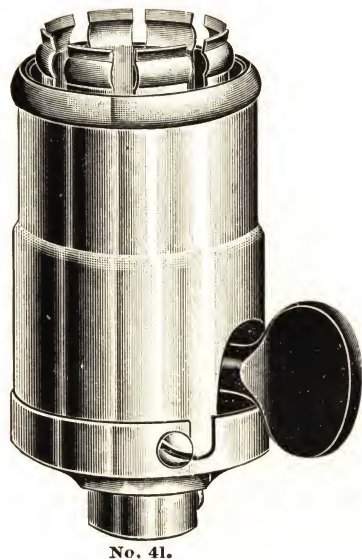
In ordering goods please specify catalogue number.



No. 33,



No. 34.



No. 41.

Westinghouse Sockets.

Catalogue No. 41.	Key	Socket, $\frac{1}{8}$ inch,	.	\$0.25
"	" 42.	Keyless "	$\frac{1}{8}$ "	. 0.22
"	" 43.	Key "	$\frac{3}{8}$ "	. 0.30
"	" 44.	Keyless "	$\frac{3}{8}$ "	. 0.27



No. 42.

All Sockets are furnished with bayonet lock on both shell and cap, thus insuring the shells against being pulled off by a heavy shade.

In ordering goods please specify catalogue number.

Thomson-Houston Sockets.



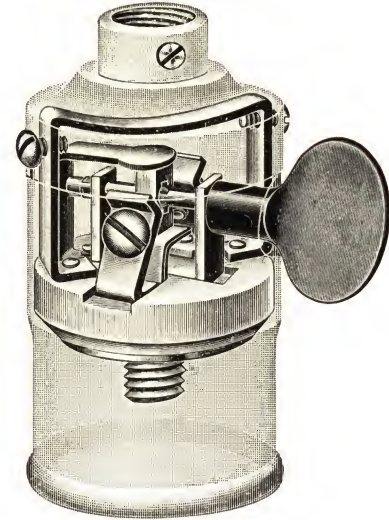
No. 46.

Catalogue No. 45.	Key Socket, T-H.,	$\frac{1}{8}$ inch,	\$0.25
" " 46.	Keyless "	" $\frac{1}{8}$ "	.22
" " 47.	Key "	" $\frac{3}{8}$ "	.30
" " 48.	Keyless "	" $\frac{3}{8}$ "	.27

All Sockets are furnished with bayonet lock on both shell and cap, thus insuring the shells against being pulled off by a heavy shade.

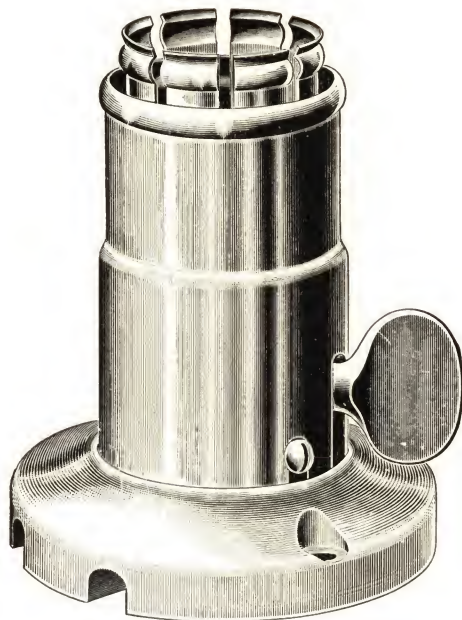
In ordering goods please specify catalogue number.

Patented June 21, 1892.



No. 45.

Westinghouse Wall Sockets.



No. 58.

Catalogue No. 58.

Key Wall, . . . \$0.30

Catalogue No. 59.

Keyless Wall,27

In ordering goods please
specify catalogue
number.



No. 59.

Thomson-Houston Wall Sockets.



No. 58.

Catalogue No. 68.

Catalogue No. 68.

Key Wall, . . . \$0.30

Catalogue No. 69.

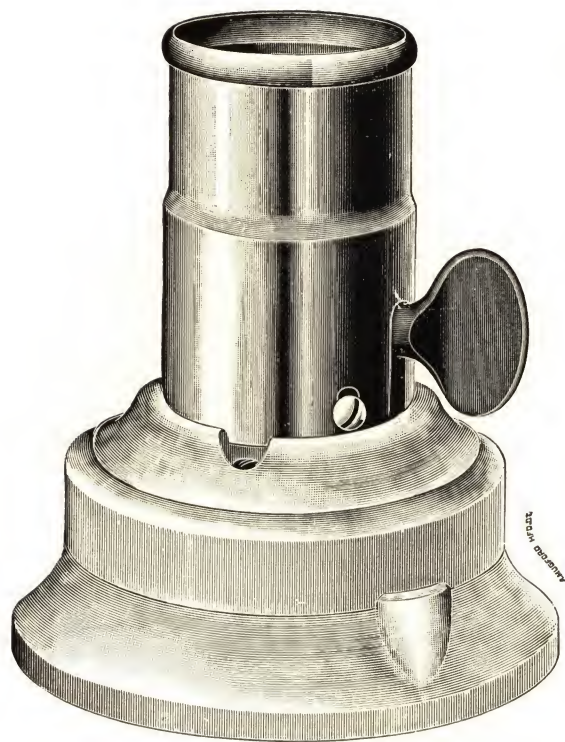
Keyless Wall, . . . :27

In ordering goods please
specify catalogue
number.



No. 59.

Catalogue No. 69.



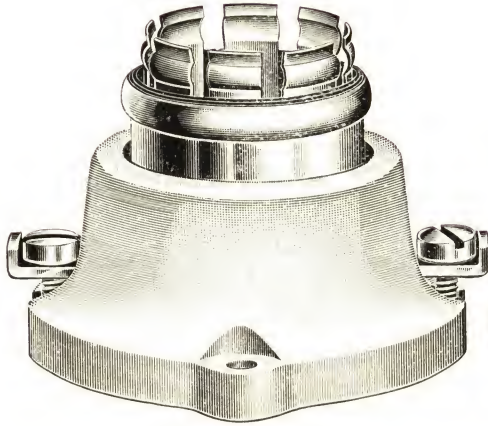
No. 64.

Fusible Key and Keyless Wall Sockets.

Catalogue	No.	52.	Cleat Westinghouse, Key, . . .	\$0.70
"	"	53.	" " Keyless, . . .	.65
"	"	54.	Concealed, " Key, . . .	.70
"	"	55.	" " Keyless, . . .	.65
"	"	56.	Moulding " Key, . . .	.70
"	"	57.	" " Keyless, . . .	.65
"	"	62.	Cleat Thomson Houston, Key, . . .	.70
"	"	63.	" " " Keyless, . . .	.65
"	"	64.	Concealed " Key, . . .	.70
"	"	65.	" " Keyless, . . .	.65
"	"	66.	Moulding " Key, . . .	.70
"	"	67.	" " Keyless, . . .	.65

In ordering goods please specify catalogue number.

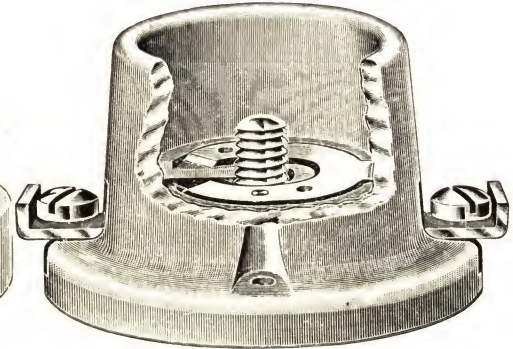
A.=Z. Receptacles.



No. 73.



No. 78. For Moulding and Concealed Work.



No. 76. For Cleat Work.

WESTINGHOUSE.

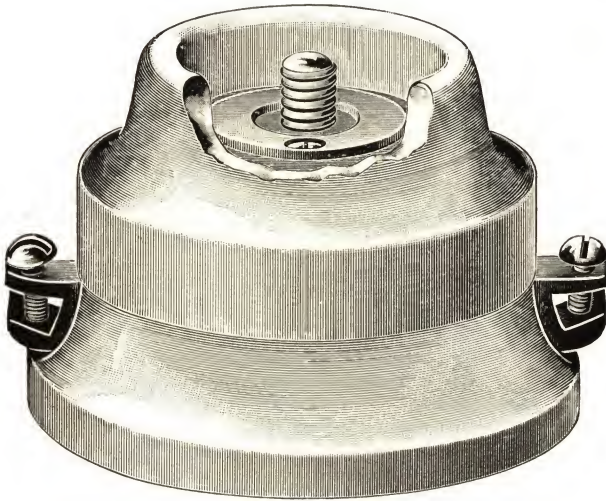
Catalogue No.	72.	Cleat,		\$0.20
"	"	73.	" for shade holder,	.25
"	"	74.	Concealed and Moulding,	.20
"	"	75.	Moulding, for shade holder,	.25

THOMSON-HOUSTON.

Catalogue No.	76.	Cleat,		\$0.20
"	"	77.	" for shade holder,	.25
"	"	78.	Concealed and Moulding,	.20
"	"	79.	Moulding, for shade holder,	.25

In ordering goods please specify catalogue number.

Fusible A.=Z. Receptacles.



No. 92.

Catalogue No. 82.	Cleat Westinghouse base, .	. . .	\$0.45
" " 84.	Concealed " . . .	. . .	.45
" " 86.	Moulding " . . .	. . .	.45
" " 92.	Cleat Thomson-Houston, .	. . .	.45
" " 94.	Concealed " . . .	. . .	.45
" " 96.	Moulding, " . . .	. . .	.45

In ordering goods please specify catalogue number.

Fusible A. Z. Receptacles with Shade Holder.

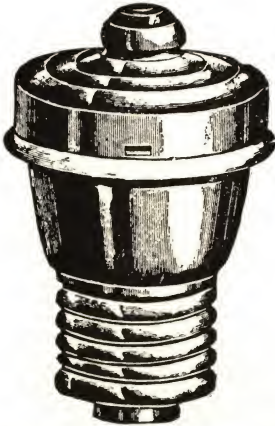
Catalogue No. 83.	Cleat Westinghouse, . . .	\$0.50
" " 85.	Concealed " . . .	.50
" " 87.	Moulding " . . .	.50
" " 93.	Cleat Thomson-Houston, . .	.50
" " 95.	Concealed " . . .	.50
" " 97.	Moulding " . . .	.50

In ordering goods please specify catalogue number.



No. 83. Shade Holder.

Fusible Attachment Plugs.



No. 91. For Edison Socket.



No. 92. For Westinghouse Socket.



No. 93. For T. H. Socket.

Catalogue No.	91.	For Edison Socket,	.	.	.	.	.	.	\$0.30
"	"	92.	" Westinghouse Socket,	.	.	.	.	.	.30
"	"	93.	" Thomson-Houston Socket,	.	.	.	.	.	.30

In case of the fuse being blown out, where these plugs are used it is merely necessary to give the brass cap a quarter turn in order to remove it, when a new fuse may be inserted in a moment.

In ordering goods please specify catalogue number.

Dovetail Rosettes.

(Patented April 7, 1891.)



For Cleat Work.

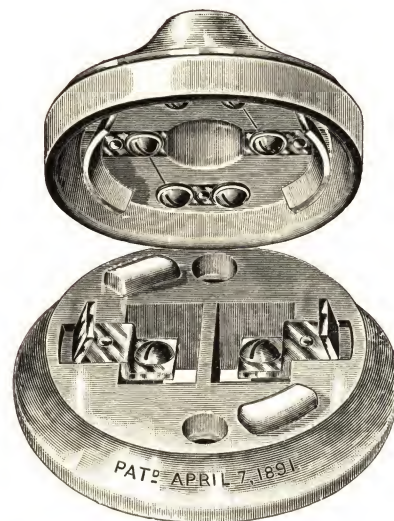
Catalogue No. 101.

Our "Dovetail" Rosette Cut Out is now so extensively and favorably known that little need be said in regard to it, but on the page following we call attention to a few of its many points of excellence.

No. 101,	.	.	\$0.25
" 102,	.	.	.25

Packed in cases of 200 each.

In ordering goods please specify catalogue number.

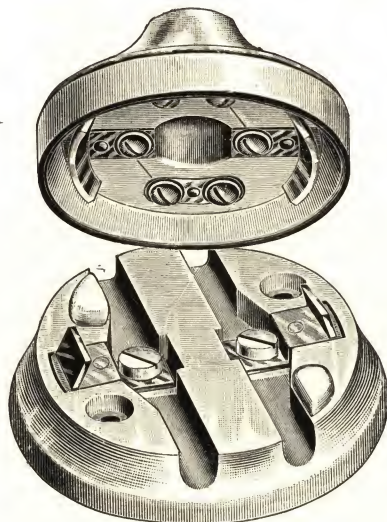


For Concealed Work.

Catalogue No. 102.

Dovetail Rosettes.

(Patented April 7, 1891.)



For Moulding Work.

Catalogue No. 104.

No screw-driver is needed to adjust cap to base.

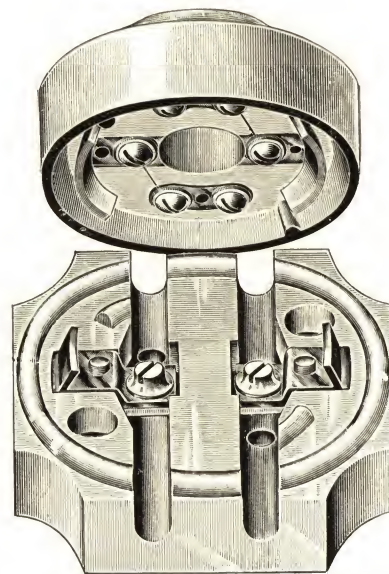
Broad and strong Dovetail contacts hold firmly together the parts which are of the best vitrified porcelain.

Construction men say that "The facility with which they can be put up decreases the pay-roll wonderfully."

No. 104,	.	.	\$0.25
" 106,	.	.	.25

Packed in cases of 200 each.

In ordering goods please specify catalogue number.



For Concealed or Moulding Work.

Catalogue No. 106.

P=T. Rosettes.

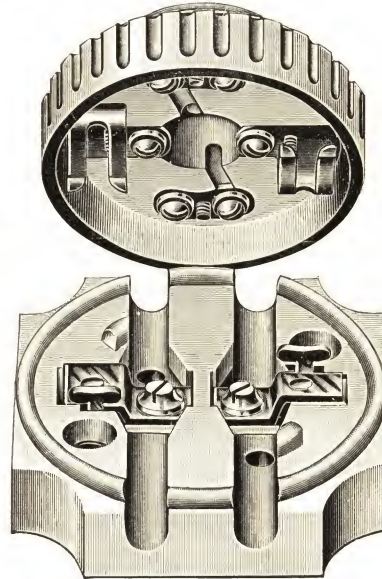
Caps and bases of all styles. P.-T.
Rosettes are absolutely interchangeable.
A firm contact is always assured.



For Cleat Work.

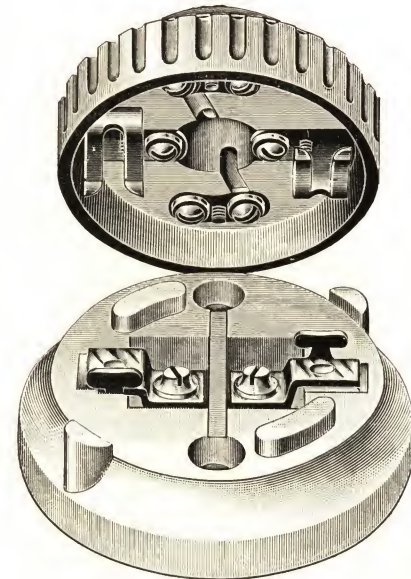
Catalogue No. 201.

Price, \$0.25



For Concealed or Moulding Work.

Catalogue No. 206. Price, \$0.25.



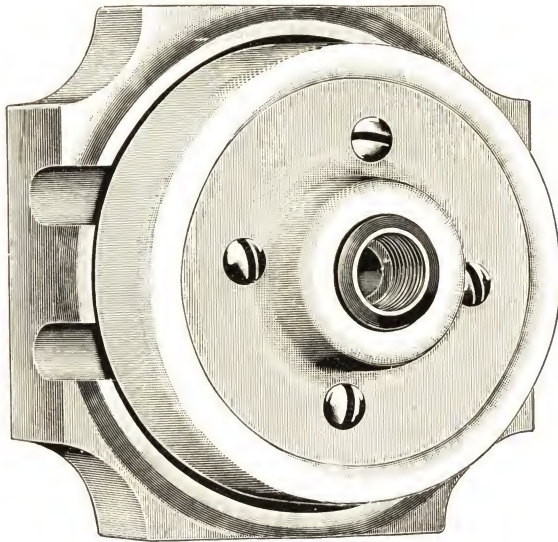
For Concealed Work.

Catalogue, No. 202.

Price, \$0.25

In ordering goods please specify catalogue number.

Bracket Cap Rosette.



No. 106B.

Catalogue No. 101B.	Cleat,	.	.	.	.	.	\$0.40
"	" 102B.	Concealed,	.	.	.	.	.40
"	" 106B.	Moulding,	.	.	.	.	.40

In ordering goods please specify catalogue number.



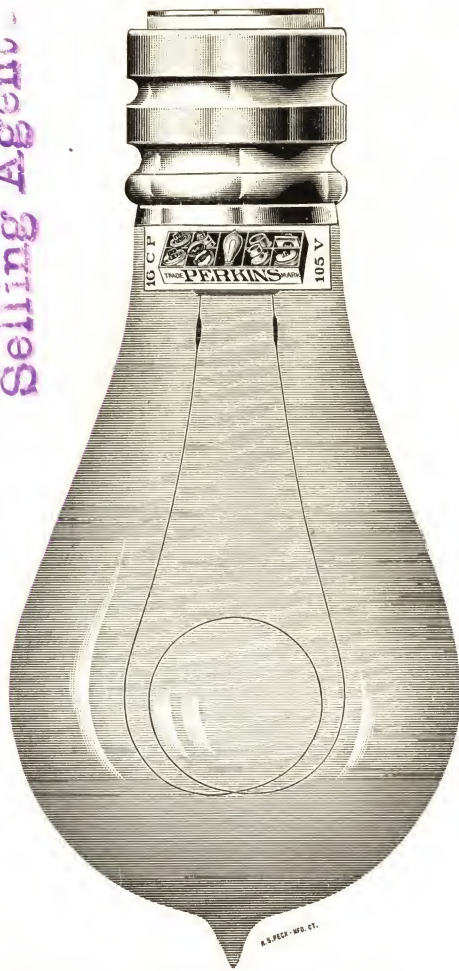
Incandescent Lamps.

This cut represents our 16 candle power low voltage lamp. Manufactured in efficiencies from 48 to 60 watts, as may be desired.

See Page 44 for price.

**In ordering lamps always state the candle power,
voltage and base required.**

JOHN M. FOX & CO.
66 Union St. Portland Me
Selling Agents.

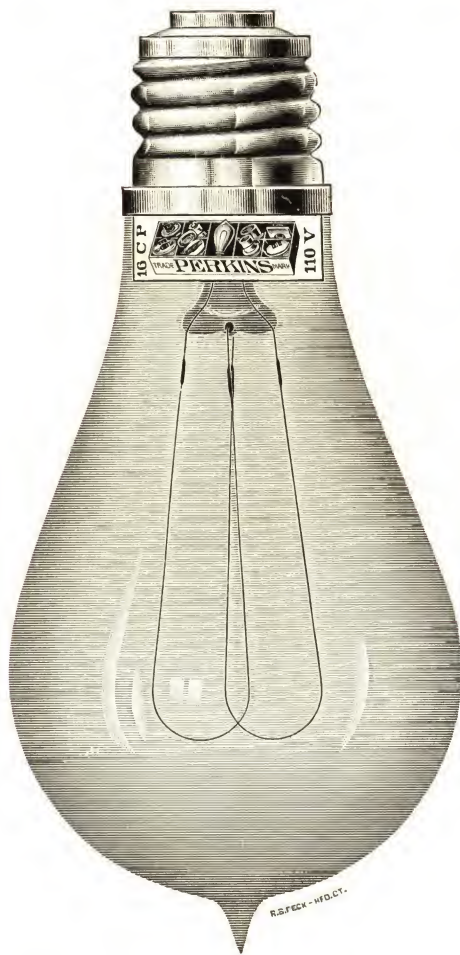


Incandescent Lamps.

This cut represents our 16 candle power high voltage lamp. Manufactured in efficiencies from 48 to 60 watts, as may be desired.

See Page 44 for price.

**In ordering lamps always state the candle power,
voltage and base required.**



Incandescent Railway Lamp.

Points of Superiority.

- 1st. It is of the highest quality, and up to date.
- 2d. It has two filaments instead of one, both of which are so short and stiff that there is no perceptible vibration when the car is passing over the roughest road, which greatly lengthens the life of the lamp and insures a good, steady light to the patrons of the road.
- 3d. It is the smallest railway lamp made, being but four and one-quarter inches in length over all, which reduces to a minimum the strain and consequent wear and tear on the base, socket and clusters.
- 4th. In every detail, even to the treatment of the filaments, the lamp has been especially designed and manufactured for railway service, with the result that it has the longest life and consequently the greatest commercial efficiency of any lamp for this purpose now on the market.
- 5th. The lamps are packed in paper boxes in lots of ten, giving a separate compartment, which insures their safe carriage and their safety while in stock until used.

See Page 44 for price list.

**In ordering lamps always state the candle power,
voltage and base required.**

(41)

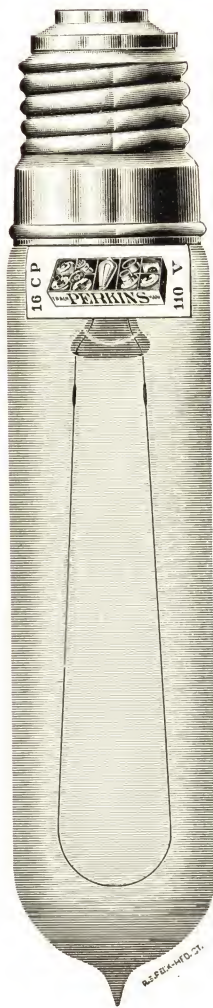
Incandescent Decorative Lamp.



This lamp will be appreciated where space is limited. The cut represents the exact size and shape of completed lamp. It can also be used to advantage for sign work. Manufactured in all colors and any desired voltage, 8, 10, 16 and 20 candle power.

See Page 44 for price list.

**In ordering lamps always state the candle power,
voltage and base required.**



Incandescent Candle Lamp.

This cut represents a lamp used for decorating purposes, also by Brewers as it will fit in the bung hole of a barrel. Manufactured in clear and ground glass and any voltage, 16 candle power.

See Page 44 for price list.

**In ordering lamps always state the candle power,
voltage and base required.**

PRICE LIST.

Candle Power.	Broken Packages.	Standard Packages.
8=10-16=20	\$0.22	\$0.20
25	.25	.22
32	.35	.30
50	.55	.50
2 in. round bulb.		
8=16	.28	.25
Tubular or Candle.		
8=16	.32	.30

STANDARD PACKAGES CONTAIN: 200 of 8, 10-16-20 or 25 c. p. 100 of 32 or 50 c. p.

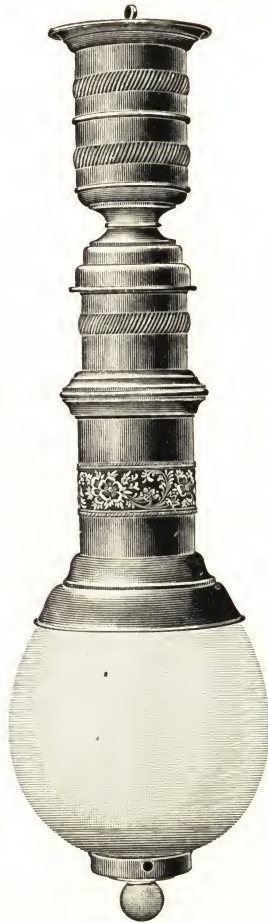
Decorative Lamps in genuine colored glass, 8-20 candle power, green, blue, or amber, 10 cents each additional. Opal and ruby, 20 cents each additional. Ground glass, 5 cents each additional.

The above prices are net and for lamps based for either Edison or Westinghouse sockets.

For T. H., U. S. or Brush Swann, .01 extra
 For Hawkeye, .02 "
 For Schafer, Perkins, etc., .03 "

In ordering lamps always state the candle power, voltage and base required.

Perkins Enclosed Arc Lamp.



Enclosed Arc.

The lamp illustrated is of the ENCLOSED ARC LONG BURNING type for use on direct current incandescent circuits, and embodies several distinctive features.

The points aimed at in the construction of this lamp are notably, great simplicity, entire absence of delicately adjusted parts, and easy adaptation to circuits of different voltages.

The arc striking and feeding system is composed of two series solenoids to whose core-connecting yoke is secured one end of an elongated plain washer clutch by means of a short link. The action of this simple clutch is made perfectly reliable by means of a small, weak dash-pot attached to its forward end.

The globe holder is the subject of an invention that has been applied to lamps by this company for some time past.

A feature worthy of note is the method of re-trimming the lamp. The lower carbon is held in a chuck which also holds the outer globe in position. The upper carbon is put through the opening in the outer globe while it hangs in its lower position, after which the chuck with its lower carbon is raised and secured, carrying the outer globe with it.

Another feature is the short circuiting clip in the resistance which is mounted on a triple thread screw, and is operated by means of a key which is accessible without disturbing the ornamentation.

All the working parts of the lamp may be brought to view at any time without unhooking it.

The cuts illustrate the standard plain lamp which maintains an 80 volt arc with a current of 4 amperes.





Fig. 1.

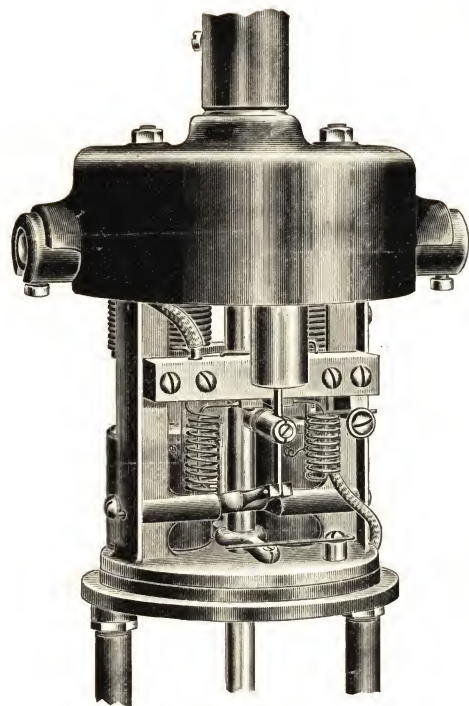


Fig. 2.

(46)

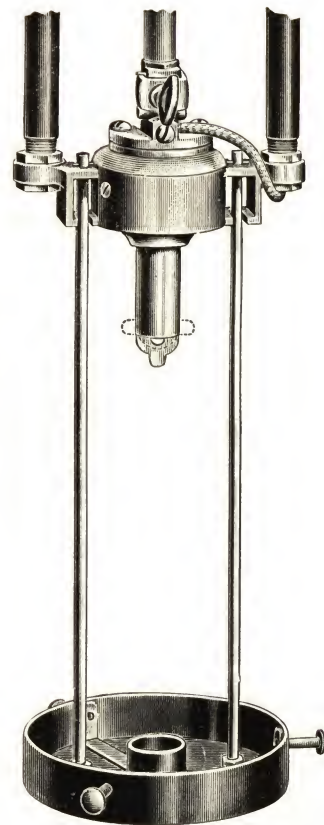


Fig. 3.

Perkins Series Arc Lamp.

The lamp illustrated on previous page is an adaptation of our well known "Waterhouse & Gamble" incandescent arc lamp to straight series work, with the addition of our patented globe holding and lowering device, and a special cut-out for shunting the arc when necessary.

FIG. 1 shows the standard long weatherproof lamp ready for service.

FIG. 2 attracts attention to the special cut-out and the method of insulating the lamp movement and line terminals from the frame proper. Two plates mounted on the cut-out or terminal block, and carrying platinum covered contact pieces, are connected respectively to the positive and negative lamp terminals, through two small open wound coils whose resistance is just high enough to insure the shunting of enough current through the series coils to energize them sufficiently to form an arc.

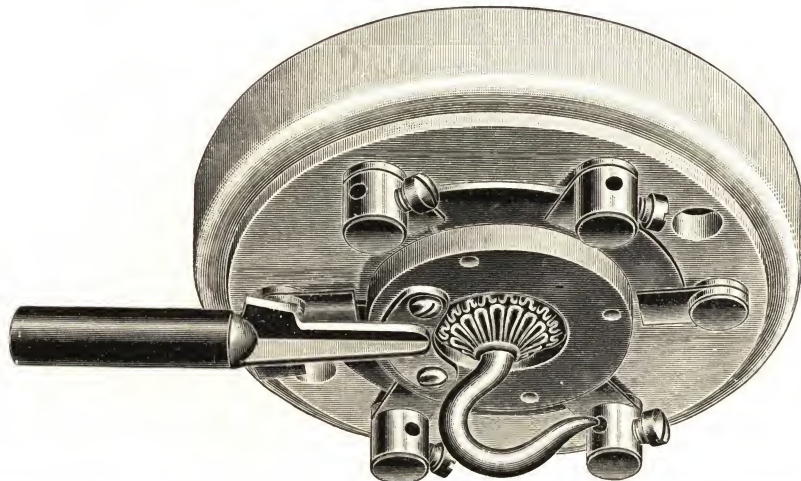
The cut-out circuit is closed by means of a phosphor bronze roller mounted on the dash pot link and insulated from it which makes contact with the two platinum covered pieces on the terminal block when the arc becomes long enough to cause the rocking lever to be carried beyond the feeding point of the lamp.

The lamp movement is insulated from the frame by means of two large vulcabeston discs.

The line terminals are each imbedded in a single piece of weatherproof insulating material which prevents moisture from entering the movement. This feature and the position of the terminals on the side of the frame instead of the top, makes the lamp weatherproof without a storm hood.

The globe holding and lowering device is so well illustrated in FIG. 3 as to need no further description.

Perkins Porcelain Hanger Board with Insulating Switch for Series Arc Lighting.



The two short posts without screws in them are connected together on the back of the board.

The line is connected to the two binding posts whose contact fingers never break connection with the commutator segments, and the lamp is wired to the two remaining posts.

The cut shows the switch midway between the "On" and "Off" positions, that is at the point in its throw where the lamp is only short circuited ; by completing the throw the lamp circuit is opened at two points with exceptionally long breaks.

It may be used as an insulating switch for incandescent arc lighting if desired, by connecting the lamp to the posts whose fingers are always in contact with the segments and removing the two short posts entirely.

Waterhouse, Gamble & Co. Arc Lamps.

MR. A. G. WATERHOUSE, the designer of this lamp, has perhaps been more successful in this special field than any other inventor, and his wide experience and knowledge of the qualifications requisite to a thoroughly first-class lamp have enabled him to produce one, which, being simple in construction, has at the same time all the features that have so far been found desirable.

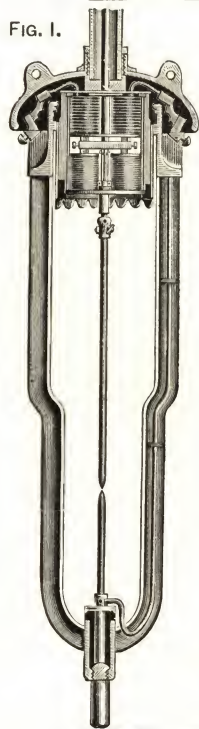
THE PERKINS ELECTRIC SWITCH MFG. CO. has earned a name for thoroughness, which is a guarantee of the high quality of workmanship to be found in whatever comes from their factory. Though in the construction of our lamps we use only the best material and highest class of labor procurable, and are producing what we believe to be the best lamp on the market to-day, our prices are no more than those for other differential lamps of even a fairly good quality. All parts are made entirely by machinery or special tools, thus insuring interchangeability.

Figure I shows the construction of the lamp, which is in two principal parts: (1) the frame containing the two terminals and lower carbon holder complete in itself and (2) a brass cage containing the magnets, clutch and cut out.

The terminals are firmly cemented in the cap of the lamp, and the lower carbon holder is contained in a porcelain insulator in the base of the lamp, where it is held by three set screws. Insulating washers are thus entirely avoided and a perfect alignment secured.

THE PERKINS ELECTRIC SWITCH MFG. CO.

FIG. I.



The course of the current is shown clearly in the enlarged drawing (Fig. II). Entering the lamp at the point *P*, it passes into the cage and directly to the carbon rod, thence through the carbons and up through the wire in the right of the frame (Fig. I) to the binding screw *a* (Fig. II), thence into the magnets *A* and *B* to the binding screw *b*, and out through the wire to the point *N*.

There are no spring adjustments in the lamp, and, once having been adjusted to burn a certain current, it will indefinitely consume that current without further adjustment, unless there should be some variation in potential or other cause wholly apart from the lamp itself.

To guard against variation in potential, resistance is made with a sliding clip so that more or less may be used as the case demands.

The mechanism is so reliable that the light is perfectly steady and noiseless. Where two lamps are burned in series, one will not rob the other, thereby causing one to burn too short, while the other burns too long an arc, thus producing a "see saw" which has been so annoying and costly to those operating other makes of arc lamps on incandescent circuits. It will be evident that the steadiness thus produced is the cause of a very marked saving in current. In fact, one very large contract was awarded our lamp because it was clearly demonstrated by actual figures that the *coal and carbons saved in one year* would pay for the difference between ours and the cheapest of the other lamps.

In some lamps the cost of adjusting and keeping in repair is a considerable item. In our lamps it is almost nothing. There is no adjusting, and experience with the lamp for several years has shown us that the cost for repairs is about equal to that for adjusting.

We wish to call attention to the fact that those who have WATERHOUSE, GAMBLE & Co. ARC LAMPS keep them, and we have never been able to direct inquirers for second-hand lamps to a place where ours could be found. Though the lamps have been in use a number of years, there are not yet any "second-hand," a fact which speaks volumes for their wearing qualities and the satisfaction rendered.

We keep in stock magnets wound for $6\frac{1}{2}$, $8\frac{1}{2}$ and 10 amperes, and can furnish magnets for any desired current within certain limits.

Carbon holders are of two standard sizes, one to hold $\frac{7}{16}$ -inch and $\frac{1}{2}$ -inch carbons, the other to hold $\frac{9}{16}$ -inch and $\frac{5}{8}$ -inch, change from one to the other of which can be made in a moment.

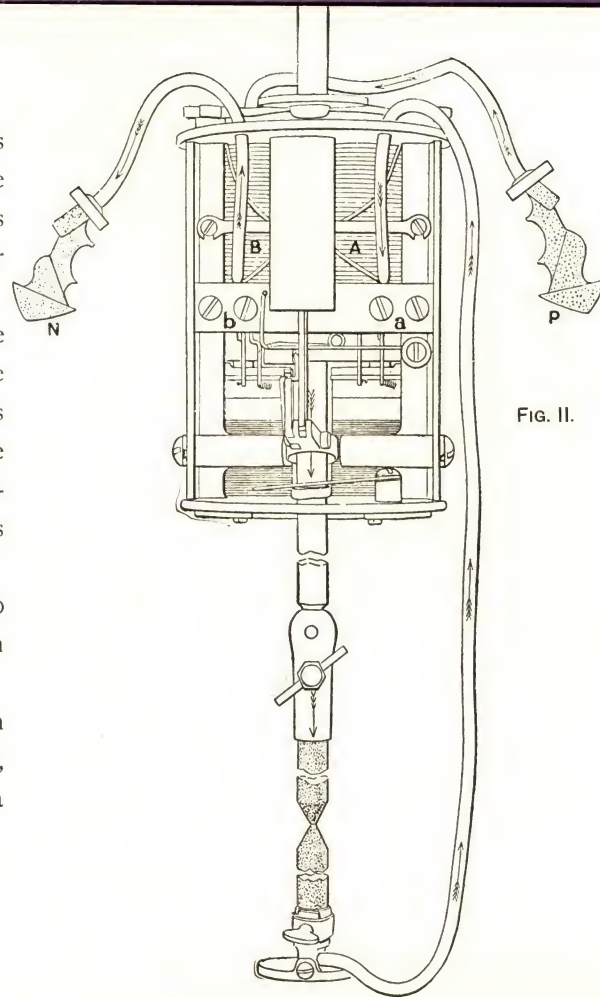


FIG. II.

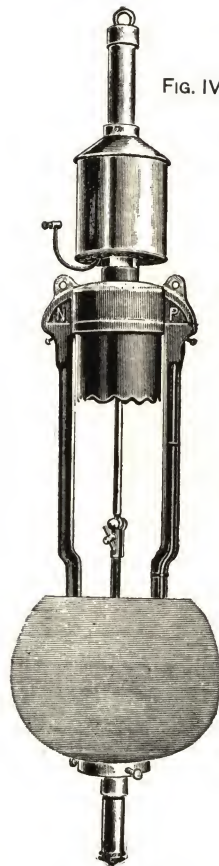


FIG. IV.

If a lamp becomes disabled, the works can be removed and a new set substituted in two minutes' time *without unhooking the lamp*, as it is merely necessary to loosen the terminal connections and two screws, change one cage for another and tighten the screws again. Time and expense are thus saved, as a set of works can be carried in an ordinary coat pocket; if it is inconvenient to repair the works on the premises, they can be expressed to us in a small package at slight expense.

It is apparent from this that if it is desired to change from full arc to less, or vice versa, it is merely a matter of changing one set of works for another as described above.

Figure IV shows the ordinary plain lamp with variable resistance on chimney.

The lamp is furnished as shown in Fig. IV or with one long resistance on one of each pair of lamps, or on wall bracket, as may be desired.

The waterproof feature of this lamp will be appreciated where they are intended for outdoor service, as the cost of a canopy is obviated, the works being completely protected against rain, which drains off the lamp and can not get inside.

A porcelain hanger board with heavy brass terminals and hook is included in the price of lamp, as is also the resistance.

Length of Long Lamp, 51 inches. Price, \$18.00.

THE PERKINS ELECTRIC SWITCH MFG. CO.

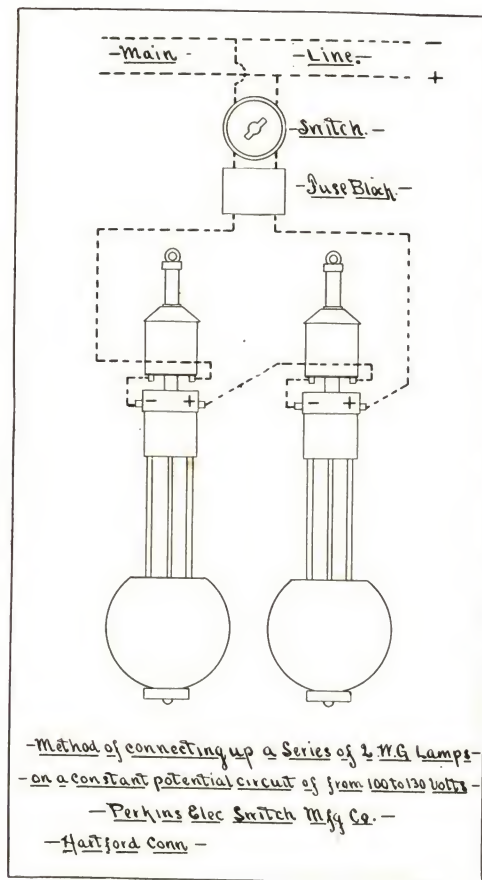


DIAGRAM FOR WIRING WATER- HOUSE GAMBLE ARC LAMPS.

TWO IN SERIES.

All Waterhouse, Gamble Arc Lamps can be furnished with gas pipe frame, as shown in illustration on this page at same prices as with cast iron frames.





Lamps No. 1 and No. 2 are furnished with cylindrical spark guards and hoods. The spark guards are ventilated, but are an effective protection against falling sparks when bits of carbons are thrown off where cheaper grades of carbons are used.

Guards are polished brass unless otherwise specified.

Price: No. 1,	-	-	-	-	\$22.00
" " 2,	-	-	-	-	23.00





A
PRICE, \$56.25.

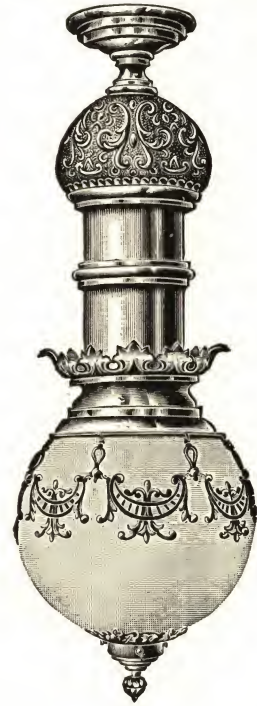
The ornamentations of Styles A, B, D and H are very largely of heavy cast metal and exceedingly rich in appearance. Style C is a combination of cast and sheet metal. Styles E, F and G are wholly of sheet metal and very neat designs.

Unless otherwise specified, trimmings will be of polished brass.

Resistance for these lamps is furnished on wall brackets and not on the chimney.

Average length of the ornamental lamps is 35 inches.

THE PERKINS ELECTRIC SWITCH MFG. CO.



B
PRICE, \$43.75.



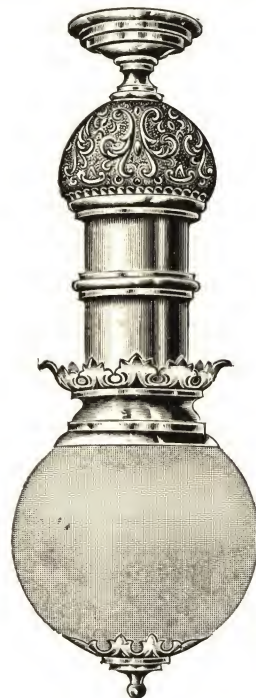
F

PRICE, \$26.00.



G

PRICE, \$25.00.



H

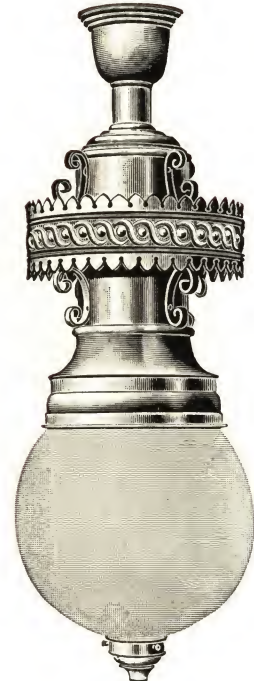
PRICE, \$37.00.



C
PRICE, \$34.00.



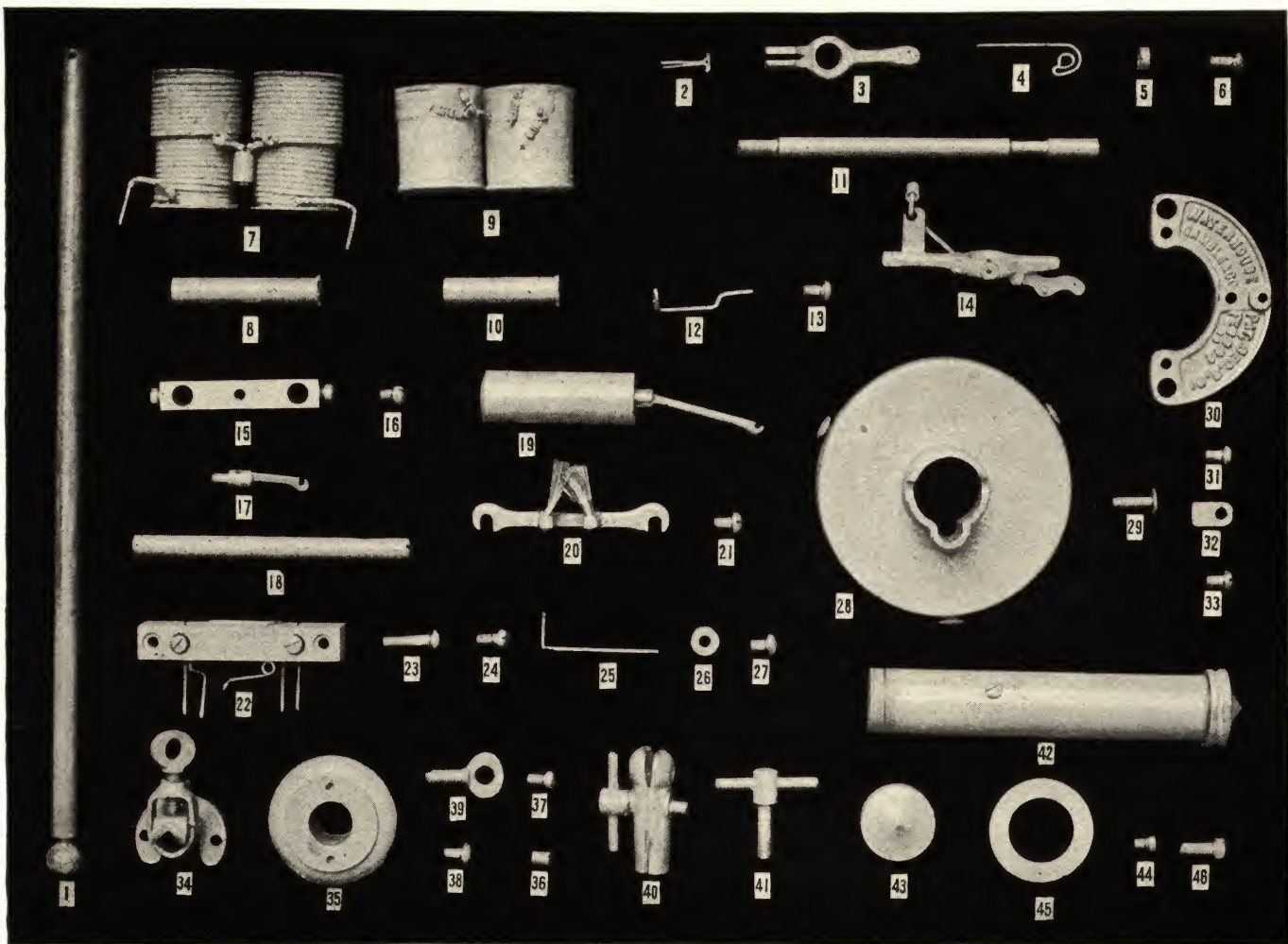
D
PRICE, \$50.00.



E
PRICE, \$28.00.

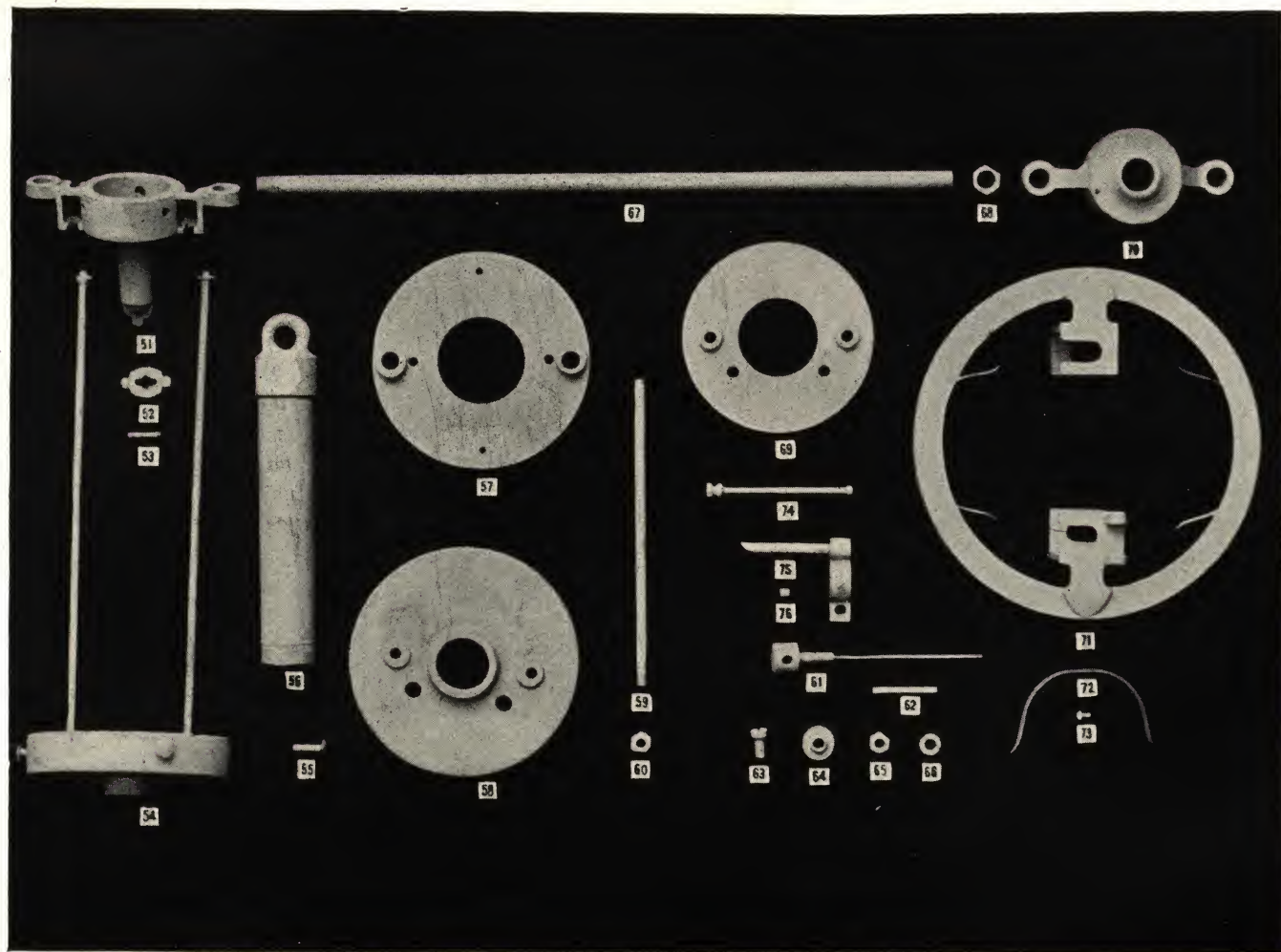
Price List of Parts of Waterhouse, Gamble & Co. Arc Lamps.

1.	Carbon Rod,	\$1.00	28.	Globe Holder,	\$.60
2.	" " Pin,	.03	29.	Globe Holder Set Screw,	.06
3.	Clutch,	.30	30.	Name Plate,	.30
4.	" Spring,	.25	31.	Name Plate Screw,	.03
5.	" " Support,	.06	32.	Hood Clip,	.06
6.	" " Screw,	.03	33.	" " Screw,	.03
7.	Main Coils,	2.00	34.	Lower Carbon Holder, complete,	.60
8.	" Coil Tube,	.15	35.	" " " Insulator,	.20
9.	Shunt Coils,	4.00	36.	" " " " Set Screw,	.03
10.	" Coil Tube,	.15	37.	" " " Binding Screw,	.03
11.	Side Rod,	.20	38.	" " " Ring Screw,	.03
12.	Lever Pivot,	.25	39.	" " " Thumb Screw,	.12
13.	" " Screw,	.03	40.	Upper " " complete,	.30
14.	" complete,	.65	41.	" " " Screw,	.20
15.	Yoke,	.25	42.	Tail Rod, complete,	.60
16.	" Screw,	.03	43.	" " Cap,	.12
17.	" Link,	.30	44.	" " Screw,	.03
18.	Armature,	.12	45.	Dust Ring,	.06
19.	Dash Pot, complete,	1.25	46.	Frame Terminal Binding Screw,	.03
20.	Contact Brush,	.45		" complete,	6.00
21.	" " Screw,	.03		Cage,	1.25
22.	Terminal Block, complete,	1.25		Chimney, complete,	1.00
23.	" " Screw,	.03		" Nut,	.25
24.	" " Binding Screw,	.03		" Eye Cap,	.25
25.	Straight Cut Out,	.20		Short Resistance,	2.00
26.	Cut Out Burr,	.06		Long "	3.40
27.	" " " Screw,	.03		Resistance Bracket,	.30



**Price List of Parts used only in the Short or Ornamental
Waterhouse, Gamble & Co. Arc Lamps.**

51	Lower Carbon Holder Support (for Plain Lamp),	\$1.00	64	Terminal Insulation,	\$0.10
52	" " " " Tumbler, .	.15	65	" Nut,	.03
53	" " " " " Pin, .	.02	66	" Washer,	.01
54	Globe Holder (for Plain Lamp),	.75	67	Frame Rod,	.40
55	" " Set Screw,	.06	68	" " Nut,	.10
56	Chimney,	1.00	69	Insulating Disc,	.25
57	Lower Frame Plate,	.60	70	Lower Carbon Holder Support (for Ornamental Lamp),	.75
58	Upper " "	.60	71	Globe Holder (for Ornamental Lamp),	1.00
59	Frame Plate Connecting Bolt,	.12	72	" " Spring,	.10
60	" " " " Nut,	.03	73	" " " Screw,	.03
61	Terminal,	.30	74	" " Pin,	.30
62	" Wire Insulation,	.05	75	" " Support,	.40
63	" Binding Screw,	.03	76	" " " Set Screw,	.03



ARC LAMPS

For 220 to 500 Volt Circuits.

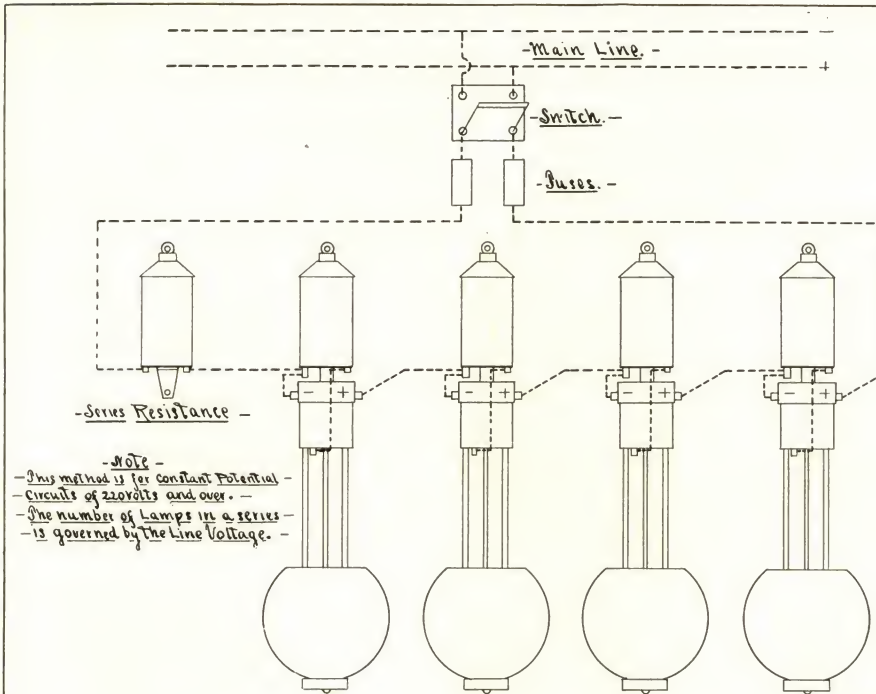
These lamps are made so as to be used in series of from four to ten lamps.

Each lamp takes about 43 volts, round the arc. On a 220-volt circuit the best results are obtained with four lamps in series, the lamps taking about 180 volts, and the balance of the current being taken care of by resistance placed in the circuit.

On a street railway circuit of 500 volts we recommend ten lamps in series. A smaller number of lamps can be used by placing more resistance in the circuit.

Each lamp is provided with resistance and an automatic cut out, so that in case of the carbon of any lamp burning out the current is shunted through the resistance (which is equivalent to the arc), thus preventing an open circuit. For out-door service we recommend the use of a hood to protect the arc against sudden gusts of wind.

Price of Railway Lamp, \$2.00.



-Note -
-This method is for Constant Potential -
-Circuits of 220volts and over. -
-The number of Lamps in a series -
-is governed by the Line Voltage. -

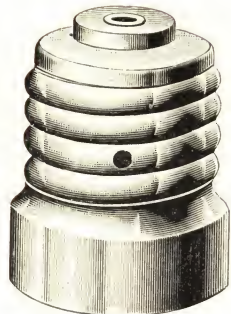
-Method of Connecting up a Series of Waterhouse & Gamble. -

-Railway Arc Lamps. -

-Perkins Elec Switch Mfg. Co. -

-Hartford Conn. -

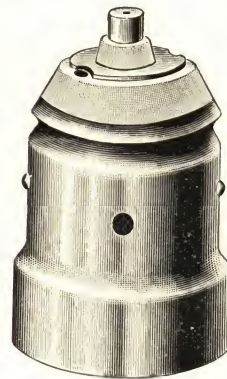
Bases for Incandescent Lamps.



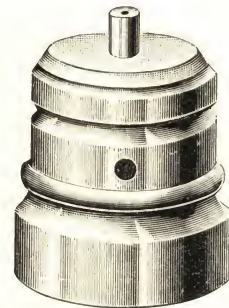
Edison.



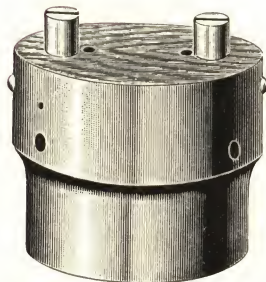
Thomson-Houston.



United States.



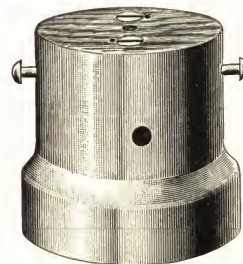
Westinghouse or Sawyer-Man.



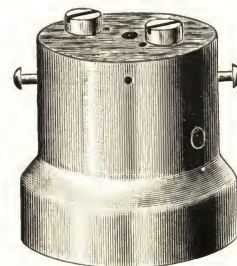
Schaefer or National.



Perkins or Mather.



Hawkeye.



Brush-Swan.



